PF word formation: Adjectival and verbal nouns in Japanese

Studies have shown that a number of linguistic phenomena can be attributed to the PF component, e.g., the *do*-support and *there*-expletive in English, and various types of head-movement. This paper will show that category ambiguous properties of A(djectival) N(oun)s in Japanese are due to an operation at PF, namely, the PF merger of a morphologically null N.

Preliminary observations of ANs in Japanese show that they display N-like behavior. First, the inflectional paradigm of ANs parallels that of Ns, while it is completely different from that of As. Second, ANs can appear as subject as well as object and be case-marked:

(1) a. Kenkoo-ga itiban-da
health-NOM No.1-COP
'Health is a top priority'

b. Kenkoo-o izisi-ro!
health-ACC maintain-IMP
'Keep healthy!'

However, further observations of ANs reveal that ANs and As share common syntactic properties: (i) they can co-occur with degree phrases such as *totemo* 'very', (ii) they can appear in the comparative construction and (iii) they can be suffixed by the verbal affix *-gar-u* 'feel'.

Following Kubo (1992), Urushibara (1993) and Nishiyama (1999), I propose that ANs form a subclass of As, which consists mostly of Sino-Japanese and other foreign words. However, my proposed analysis departs from theirs in one crucial aspect. That is, a null N is merged with ANs at PF. This analysis is based on Emonds' (2000) theory of multi-level lexical insertion, in which it is argued that purely grammatical morpheme without semantic content is inserted at PF. (2) shows how the AN *kiree* 'pretty' undergoes derivation at PF:

(2) Syntax $[_A$ kiree$]$ → PF $[_N [_A$ kiree$] [_N \varnothing]]$

The above analysis can account for the N-like behavior of ANs. First, as noted above, ANs and Ns share the same inflectional paradigm. More precisely, ANs and Ns are suffixed by the same copula verb bearing tense. This copula without semantic content is required to merge with Ns at PF as shown in (3); ANs are Ns at PF, hence the N-like inflectional paradigm.

(3) PF (Step 1) $[_N [_A$ kiree$] [_N \varnothing]]$ → PF (Step 2) $[_N [_A$ kiree$] [_N \varnothing]] + [_V$ dat$]$-$[_T$ ta$]$

Second, provided that the nominative and accusative case-markers in Japanese are suffixed to Ns at PF (Fukui and Sakai 2003, Nakamura 2005, among others), the facts in (1) can be considered PF phenomena. Furthermore, the three kinds of A-like syntactic behavior of ANs mentioned above can be accounted for since ANs are As in syntax.

It follows from the above analysis of ANs that the AN with the degree phrase *totemo kiree* 'very clean' and the comparative phrase *dare-yori-mo suteki* 'anyone-than-FOC lovely' should be able to be case-marked because both the null N merger and case-marking are considered to take place at PF. (4) and (5) show that this is indeed the case:

(4) $[_N [_{AP}$ totemo kiree$] \varnothing]$-ga suki!
very clean-NOM like
'(I) like extreme cleanliness'.

(5) $[_N [_{AP}$ dare-yori-mo suteki$] \varnothing]$-o mezasi-te
anyone-than-FOC charming-ACC aim-GER
'aiming to be more charming than anybody'

Additionally, a question naturally arises as to where the nominalizer *-sa* in Japanese, which can suffix to only As and ANs, stands in relation to the null N at issue. Given that (4) and (5) become ungrammatical when *-sa* replaces the null N, we can conclude that it is introduced before PF, probably in the lexicon.

If the proposed analysis is correct, the PF-merged null N should be observed in other areas of grammar. One such case is V(erbal) N(oun)s in Japanese, most of which are of foreign origin just like ANs. It has been observed that VNs display both N- and V-like behavior. VNs are like Ns, in that (i) they display the inflectional paradigm of Ns and (ii) they can appear as subject as well as object. On the other hand, VNs exhibit V-like properties. For example, the VN *hihan* 'criticism' resists a genitive DP in the pre-nominal position unlike Ns, but takes an accusative DP just like transitive Vs (i.e., **ronbun-no hihan-si-ta* 'paper-GEN criticism-do-PAST' versus *ronbun-o hihan-si-ta* 'paper-ACC criticism-do-PAST'). Further, (6) illustrates that in an adverbial phrase that involves the temporal N *-sai* 'occasion', the VN *hihan* 'criticism' can take a nominative subject and an accusative object.

(6) gakusee-ga sensee-no ronbun-o hihan-no sai-ni
student-NOM teacher-GEN paper-ACC criticism-GEN occasion-on
'on the occasion of the student's criticism of the teacher's paper'.

VNs are Vs in syntax, but the null N turns them into Ns at PF, which can account for their category-ambiguous behavior illustrated above.